Monika Zięciak
ORCID: 0000-0002-9204-1402
University of Szczecin

Students' Relationships With Peers and Teachers in the Context of Substance Use

Relacje uczniów z rówieśnikami i z nauczycielami w kontekście używania substancji psychoaktywnych

ABSTRACT

This article examines students' relationships with their peers and teachers at school, exploring how these connections relate to adolescents' use of psychoactive substances. The research was conducted using a diagnostic survey and an original questionnaire, involving 396 students aged 13 to 19 from primary, secondary, engineering, and vocational schools. The results revealed a significant relationship between adolescents' connections with their peers and teachers and their substance use. Specifically, the greater the intensity of substance use among adolescents, the weaker their relationships with teachers and peers. Conversely, stronger relationships with school staff and peers were associated with fewer symptoms of alcohol and drug dependence. Academic performance, a mediating variable, played an important role in the study. The mean academic performance scores correlated significantly with adolescents' relationships with teachers. The findings indicate that stronger relationships with school staff were associated with higher academic achievement, whereas lower academic performance correlated with higher levels of substance use among adolescents.

KEYWORDS
school, relationships, student, teacher, psychoactive substances

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szkoła, relacje, uczeń, nauczyciel, substancje psychoaktywne

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ABSTRAKT

W artykule przedstawiono wyniki badania relacji uczniów z rówieśnikami i z nauczycielami w szkole pod kątem wpływu, jaki na te relacje ma używanie substancji psychoaktywnych przez nastolatków. Badania przeprowadzono z wykorzystaniem sondażu diagnostycznego oraz oryginalnego kwestionariusza. W badaniu brało udział 396 uczniów w wieku od 13 do 19 lat ze szkół podstawowych, średnich, technicznych i zawodowych. Wyniki badania ujawniły istotny związek między relacjami nastolatków z rówieśnikami i z nauczycielami a używaniem przez nich substancji psychoaktywnych. Im większa jest intensywność używania substancji psychoaktywnych wśród nastolatków, tym słabsze są ich relacje z nauczycielami i z rówieśnikami. Z kolei silniejsze relacje z personelem szkolnym i z rówieśnikami wiązały się z mniejszą liczbą objawów uzależnienia od alkoholu i narkotyków. W badaniu ważną rolę odegrała zmienna pośrednicząca, jaką są w tym wypadku osiągane wyniki w nauce. Średnie wyniki dotyczące osiągnięć w nauce korelowały istotnie z relacjami nastolatków z nauczycielami. Wyniki przeprowadzonych badań wskazują, że silniejsze relacje nastolatków z personelem szkoły były powiązane z lepszymi wynikami w nauce, podczas gdy gorsze wyniki w nauce korelowały z wyższym poziomem nadużywania przez nich substancji psychoaktywnych.

Introduction

Adolescence is a period of psychological, social, and biological changes that trigger a need for identification, independence, and autonomy. These developmental shifts may lead young people to engage in risky behaviors, such as using psychoactive substances. In today's world, substance use is one of the most serious social problems affecting young people. Research on the effects of tobacco, alcohol, and other drugs leaves no doubt about the harmful impact of these substances on adolescent development, health, and social functioning. One of the most concerning consequences is damage to the central nervous system, which can lead to addiction. Therefore, identifying key protective factors that help prevent substance use among adolescents is of utmost importance. The aim of this study was to examine the relationships between students, their peers, and their teachers in the context of psychoactive substance use.

The use of psychoactive substance among adolescents

According to the 2017 Risk Behaviour Report published by the Institute of Mother and Child, the use of psychoactive substances is among the most common hazardous behaviors among adolescents (Dzielska 2017: 5). Alcoholic beverages are the most frequently consumed stimulant, surpassing both cigarettes and drugs in popularity among young people (Malczewski, Jabłoński 2023: 11).

The prevalence of psychoactive substance use among students in Kraków-based schools (n = 1,743) was studied by Renata Modrzejewska and Jacek Bomba (Modrzejewska, Bomba 2010: 586–588). Their analysis revealed that 73.2% of boys and 67.9% of girls used stimulants. The largest subgroup consisted of students who consumed alcohol only (boys—45.9%, girls—41.5%). The second largest group consisted of adolescents who drank alcohol and smoked cigarettes (boys—23.6%, girls—32.1%). The third group comprised students who drank alcohol, smoked cigarettes, and used drugs (boys—18.0%, girls—13.9%).

Alcohol use

According to a 2007 study conducted among Polish adolescents (*N* = 9,360), 23% of students aged 12–17 admitted to drinking alcohol (Wojtyła, Bojar, Biliński 2010: 575). In 2021, 66% of students reported having drunk beer at least once, 62% had consumed vodka or other strong spirits, and 37% had drunk wine. The most recent poll by the CBOS Foundation in 2021 revealed that 43% of young people reported getting drunk at least once a month. Furthermore, 13% of respondents admitted to being intoxicated three or more times in the month preceding the survey. Boys were more likely to report being intoxicated (47%) compared to girls (39%). This trend was particularly evident among vocational school students with lower academic performance: 50% of two- and three-year students reported intoxication, compared to 39% of four-year students and 31% of five- and six-year students.

The 2021/2022 *International HBSC Report* (*Health Behaviour in School-Aged Children*) indicates that 11% of 11-year-olds had consumed alcohol in the past 30 days (7% of boys, 4% of girls). Among

15-year-old students, the figures rose to 39% of boys and 35% of girls reporting alcohol use (Charrier et al. 2024: 33–39).

Smoking

Research indicates a decline in the percentage of regular nicotine smokers. In 2018, 18% of adolescents reported smoking regularly, compared to 31% in 2003 (Malczewski 2022: 235; *ESPAD Report*). Between 2018 and 2022, the most significant decreases were observed among 13-year-old boys and 15-year-old boys and girls. However, the growing use of e-cigarettes among youth is a cause for concern. In Poland, in 2022, 7% of 11-year-old boys and 3% of girls in the same age group admitted to using e-cigarettes in the past month. Among 15-year-olds, 39% of boys and 35% of girls reported e-cigarette use (Charrier et al. 2024: 25–32).

As research suggests, the likelihood of developing a nicotine addiction largely depends on the age of initiation—the younger the age at which smoking begins, the higher the risk of addiction (Kostowski 2001). Some researchers also propose that cigarette use serves as a precursor to drug use, a phenomenon referred to as the *gateway drug effect* (Challier et al. 2000: 33–42).

The use of marijuana/hashish

According to the 2019 *European School Survey Project on Alcohol and Drugs* (ESPAD), 21% of students reported having used drugs at least once in their lives. In 2021, the CBOS survey recorded a lower figure of 13%. Research findings indicate that the most commonly used drugs are marijuana and hashish. Among 17- to 18-year-olds, 36.2% admitted to having used these substances at least once, and 9.8% reported using them in the past 30 days (Malczewski 2022: 208). The use of new psychoactive substances by adolescents is decreasing, as shown by the results of ESPAD surveys conducted in 2011 and 2015 (approximately 10%) and in 2019 (5.2%) (Sierosławski 2020: 64).

Sleeping pills and tranquilizers

The use of psychotropic drugs (e.g., sleeping pills, tranquilizers) without a doctor's prescription is relatively common among adolescents in Poland. In 2019, 15.1% of 15–16-year-olds and approximately 18.3% of 17–18-year-olds reported such use. Notably, the prevalence is twice as high among girls (Sierosławski 2020). A particularly concerning trend is the increasing use of painkillers for intoxication—substances widely available in many stores. In 2019, 6.6% of 15–16-year-olds participating in ESPAD surveys admitted to using painkillers for this purpose (Sierosławski 2020: 44).

Afterburners and inhalants

In 2019, 8.6% of 15- to 16-year-olds and approximately 6.9% of 17- to 18-year-olds reported using new psychoactive substances (Sierosławski 2020: 44). Since 2015, there has been a significant decline in their use among both age groups. New psychoactive substances, like volatile substances, are highly toxic. Inhaling petrol or sniffing adhesives poses a serious risk to human life. A 2004 study conducted by Krzysztof Ostaszewski involving 1,299 schoolchildren in Poland (63% of whom were boys) found that 41% of adolescents exhibited occasional substance use, 33% engaged in problematic use, and 26% showed symptoms of dependence (Ostaszewski 2008: 363).

The importance of adolescent interpersonal relationships in the prevention of substance use

Research on adolescents' interpersonal relationships has yielded inconclusive results. In recent years, improvements in adolescent interactions with teachers have been observed. On the one hand, the frequency of conflicts in these relationships has decreased, while on the other, the number of authority figures recognized by students has increased. Notably, 77% of students report having at least one teacher in their school environment whom they particularly value, like, and respect. Regarding peer relationships, adolescents report an average of five close friendships with classmates (Bożewicz 2019: 47–51). Most students express satisfaction with open communication with

their peers, with younger adolescents reporting the highest levels of satisfaction and older adolescents the lowest. Gender does not appear to significantly influence communication, although younger adolescents and males perceive the fewest difficulties in forming relationships (Napora 2019: 64–65). However, some findings raise concerns: one in four students does not feel accepted by their peers, and an even larger proportion believes their peers are neither friendly nor helpful (Woynarowska-Sołdan et al. 2000).

The highest percentage (approximately 9%) of students reporting a lack of close friends is found among those attending general, specialized, vocational, and engineering secondary schools (Bożewicz 2019: 47–51). Additionally, there has been a rise in the number of young people who are dissatisfied with their lives, lack confidence in their abilities, feel lonely, and experience emotional distress or physical pain (PARPA 2000). Relationships with peers play a crucial role in the transition from childhood to adulthood, as emphasized by many authors. School relationships provide a foundation for adolescent development across psychological, physical, social, and emotional dimensions (Poleszak 2004: 155–170). These interactions help fulfill psychological needs (Oleszkowicz, Senejko 2013), including role-playing, acceptance, recognition, belonging, and achievement (Brzezińska 2000), thereby fostering positive attitudes toward others (Mika 1975). Peers contribute to building a sense of security and mutual trust (Borowski 2010: 41–54; Oleszkowicz, Senejko 2013; Maryl, Korolczuk 2008: 49). The acceptance they provide ensures social status and popularity within the group (Bukowski, Hoza, Boivin 1993: 23–37). Group membership and the resulting acceptance help adolescents cope with difficulties arising from family problems (Ścibisz 2009). Positive peer relationships serve as a valuable social resource, offering essential support and assistance in challenging situations (Goldstein, Davis-Kean, Eccles 2005: 409–411; Stach-Hejosz 2011: 166–176; Grygiel 2015).

Adolescents' experiences with peers significantly influence their socialization (Borowski 2010) and play a crucial role in shaping their personality (Harris 1998). These relationships also contribute to the development of self-image and the formation of global self-esteem (Black, McCartney 1997: 91–110; Fass, Tubman 2002: 561–573). Positive and supportive peer relationships foster identity

development and self-formation in adolescents (Corsano, Majorano, Champretavy 2006: 341–353; Gibson, Jefferson 2006: 111–125; Cotterel 1992: 28–42). Furthermore, they provide opportunities to develop empathy and promote the growth of prosocial behaviors (Eisenberg, Fabes 1998: 701–778; Garnefski, Diekstra 1996: 1657–1664; Coie, Dodge 1998: 779–862).

Positive relationships and friendships among students can be considered protective factors against engaging in risky behaviors. Many researchers have found that such relationships help alleviate tensions (Oleszkowicz, Senejko 2013) and reduce the risk of developing aggressive behavior and emotional problems (Eisenberg, Fabes 1998: 701–778; Garnefski, Diekstra 1996: 1657–1664; Coie, Dodge 1998: 779–862), as well as depression and a sense of alienation (Schneider, Younger 1996: 95–108; Bukowski, Newcomb, Hartup 1996). Studies by Laible and Thompson, as well as Laible et al., indicate that adolescents with positive peer relationships are better socially adjusted and exhibit lower levels of depression and aggression while being more sociable. In contrast, adolescents who are less attached to their peers tend to be less socially adjusted. Interestingly, studies by the aforementioned authors reveal that adolescents with a strong attachment to peers but a weak attachment to parents are better socially adjusted than those with a stronger bond with parents but a weaker bond with peers (Laible et al. 2004: 703–716; Thompson 2000: 285–316). This outcome is likely due to the heightened importance of peer relationships during adolescence.

Relationships with teachers hold significant importance for two main reasons. Firstly, as adolescents begin to prioritize peer relationships over those with their parents, teachers and educators play a crucial role in ensuring that the moral standards of peer groups align with those of the broader social environment. Secondly, teachers provide adolescents with the opportunity to communicate with positive adult role models. In recent decades, the role of teachers has evolved to encompass a broader educational function. Teachers are now expected not only to impart knowledge but also to shape behavior and attitudes, support personality development, correct undesirable behavior, and offer assistance in challenging situations. They are responsible for fostering relationships within the school community, acting as reliable, trustworthy, supportive, attentive, and empathetic figures.

Methodological framework of the present study

This study focused on students' perceptions of their relationships with teachers and peers, specifically in the context of substance use. The aim of the research presented in this article was to examine the connection between students' relationships with peers and teachers and their consumption of psychoactive substances, including beer, wine, vodka, nicotine, cannabis, mephedrone, amphetamines, cocaine, heroin, NPS, and other drugs. Hence, the following research questions and corresponding hypotheses were formulated:

Q1: How do students' relationships with teachers and peers at school affect the intensity of their psychoactive substance use?

- H1.1: It is likely that students' relationships with teachers are negatively correlated with the intensity of their psychoactive substance use.
- H1.2: It is presumed that the stronger the students' relationships with their peers, the lower the intensity of their psychoactive substance use.

Q2: What are the relationships between students' relationships with teachers/peers at school and their reported number of psychoactive substance abuse symptoms?

- H2.1: There is a negative correlation between students' relationships with teachers and psychoactive substance dependence symptoms reported by students.
- H2.2: It is likely that the stronger the students' relationships with their peers, the fewer psychoactive substance dependence symptoms they report.

Q3: What are the relationships between the age of students and their use of selected psychoactive substances?

- H3.1: It is assumed that there is a positive correlation between age and substance use among the surveyed adolescents.
- H3.2: It is assumed that there will be more statistically significant associations between the use of various psychoactive substances and older students.

The surveys were conducted in cooperation with school management during lessons scheduled at pre-arranged times and dates. Parents were informed in advance about the study's purpose, methods of data collection, and the topics covered in the questionnaire. They were also asked to provide consent for their children's participation.

The research employed a diagnostic survey method, designed to gather opinions from a large group of respondents. This involved a survey technique in which students completed a paper-and-pencil questionnaire. Surveys were conducted in a classroom setting with only the students and the interviewer present to ensure privacy and discretion. Measures were taken to create a comfortable environment, including seating students individually at separate desks. After completion, the research materials were securely collected, and only questionnaires without significant errors, such as unanswered questions or crossed-out responses, were selected for analysis. Participants were informed of the voluntary nature of the study and their right to withdraw at any stage without explanation.

The research used an original survey questionnaire that included:

- A scale measuring the extent of psychoactive substance use, which consisted of 18 questions assessing substance use frequency over the past six months. Students responded using a Likert scale, where 1—not at all, 2—rarely, 3—sometimes, 4—often, and 5—very often.
- An alcohol dependence scale, based on the ICD-10 dependence criteria and the CAGE and MAST screening tests. This section included 13 questions assessing the frequency of dependence symptoms over the past 12 months. It was assumed that more than four affirmative answers indicated a degree of addiction.
- A nicotine dependence scale, based on the Fagerström Nicotine Tolerance Questionnaire, consisting of eight questions. The results helped determine the degree of nicotine dependence (Woronowicz 2003: 168).
- A scale measuring relationships with teachers, consisting of 25 questions beginning with statements such as, *"How often do teachers: praise students, give students a chance to improve their behavior or grades, expect students to be humble and follow instructions, or express gratitude when something is done for them?*" Responses were structured using a Likert scale.
- A scale measuring students' relationships with peers, consisting of 23 questions beginning with statements such as: *"How often do students in your class: treat each other with respect, help each other, engage in conflicts, pressure others into unwanted actions, or*

support others in difficult situations?" As with the evaluation of students' relationships with teachers, responses were arranged on a Likert scale.

The research was conducted in November 2023, involving a representative sample of 396 students aged 13 to 19. Participants included adolescents from primary schools (2.3%), technical schools (10.6%), trade schools (16.2%), and general and vocational secondary schools (71.2%) in Police County, Zachodniopomorskie Province, Poland. The group comprised 48.8% boys and 51.2% girls. The age distribution of respondents was as follows: 13-year-olds (2.1%), 14-year-olds (22.1%), 15-year-olds (26.8%), 16-year-olds (21.8%), 17-year-olds (17.4%), 18-year-olds (7.2%), and 19-year-olds (3.3%). The average age of the participants was 15 years.

The findings discussed in this article are part of a broader project aimed at assessing the scope and determinants of psychoactive substance use among students from selected schools in Police County. This study was funded by the Head of Police County using funding from the Zachodniopomorskie Province budget under the "Government Programme for Reducing Crime and Antisocial Behaviour—SAFER TOGETHER 2022–2023."

Results

The results of the empirical research reveal a statistically significant correlation between students' interpersonal relationships with teachers and their use of most psychoactive substances (eight in total), including beer, vodka, other alcoholic beverages, nicotine, cannabis, hard drugs, and unspecified drugs. The negative value of Spearman's rho coefficient indicates that as adolescents' use of psychoactive substances increases, their relationships with teachers grow weaker. However, no statistically significant correlations were observed for the use of wine, amphetamines, cocaine, heroin, or NPS. Consequently, the hypothesis proposed in the study was only partially confirmed.

The analysis reveals a statistically significant correlation between students' interpersonal relationships with peers at school and the use of six substances: beer, vodka, other types of alcohol, cannabis, NPS, and drugs. The findings suggest that as the intensity of substance use among adolescents increases, their relationships with schoolmates

tend to weaken. However, the research indicates no significant correlation between the strength of peer relationships and the use of wine, nicotine, or other drugs. Therefore, the hypothesis proposed in the methodological section is only partially confirmed based on these correlations.

Table 1. Students' interpersonal relationships at school and their use of psychoactive substances

Types of stimulants	Interpersonal relationships			
	with teachers		with peers	
	rho	p	rho	p
beer	0.177	**0.001**	0.169	**0.001**
wine	0.083	0.103	0.057	0.267
spirituous liquors	0.181	**0.000**	0.110	**0.031**
other alcoholic beverages	0.187	**0.000**	0.129	**0.011**
nicotine	0.197	**0.000**	0.087	0.091
cannabis	0.171	**0.001**	0.196	**0.000**
illicit drugs	0.157	**0.002**	0.064	0.208
• mephedrone	0.147	**0.004**	0.066	0.201
• amphetamines	0.040	0.436	0.077	0.131
• cocaine	0.079	0.123	0.056	0.278
• heroin	0.062	0.223	0.096	0.061
• NPS	0.077	0.131	0.105	**0.041**
prescription medications	0.192	**0.000**	0.131	**0.010**

Legend: rho—Spearman correlation coefficient, p—significance level.
Source: Own study.

A detailed summary of the findings, including the correlation coefficients between the dependent and independent variables, addresses the second research question (Table 2). The results reveal that relationships with teachers are significantly correlated with adolescents' addiction to alcohol, drugs, and nicotine. The negative value

of the *rho* coefficient in each case suggests that stronger relationships with teachers are associated with fewer symptoms of addiction to these substances among students. These findings support the hypothesis.

Peer relationships also show a significant correlation with adolescents' addiction to psychoactive substances. The data suggest that stronger peer relationships are associated with fewer reported symptoms of drug and alcohol dependence. However, no significant relationship was observed between peer relationships and nicotine dependence. These findings partially confirm the hypothesis.

Table 2. Relationships with teachers and peers and symptoms of addiction reported by students

Relationships at school		**Addiction to**	
		alcohol and drugs	**nicotine**
with teachers	rho	0.203	0.194
	p	**0.000**	**0.000**
with peers	rho	0.143	0.050
	p	**0.006**	0.320

Legend: rho—Spearman correlation coefficient, p—significance level.
Source: Own study.

The analysis of the correlation between psychoactive substance use and the age of adolescents participating in the study indicates statistically significant positive correlations between the variables. In the 13–14 age range, 43.5% of surveyed students reported consuming beer. The percentage increases with age: 45.9% among 15-year-olds, 64.1% among 16-year-olds, and 69.2% among 17-year-olds. Among 18–19-year-olds, beer consumption is even more prevalent, with 75% reporting use. The second most commonly consumed psychoactive substance among the surveyed adolescents is vodka. Notably, 37% of 13–14-year-olds reported having consumed vodka at least once. As with beer, vodka consumption increases with age: 62.1% of 17-year-olds and 77.5% of 18–19-year-olds reported drinking it.

Other alcoholic beverages rank third among the psychoactive substances studied: 34.8% of 13–14-year-olds reported consuming these beverages. The percentage rises slightly over the next three

years, reaching 42.4%, but after reaching adulthood, there is a marked increase, with 65% of 18–19-year-olds reporting consumption. Wine consumption is lower than the substances mentioned above. Nearly 30% of 13–14-year-olds reported drinking wine at some point, and this figure rises to nearly 50% among 16–17-year-olds. Interestingly, at 15 years old, wine consumption temporarily decreases to 22.4% before increasing again in later years.

Positive correlations between age and substance use are also observed with drugs: 22.2% of 13–14-year-olds reported using drugs without a doctor's recommendation. However, at 15 years old, this figure drops significantly to 9.2%. The decline is short-lived, as drug use increases again among 16- and 17-year-olds, reaching 21%, before decreasing slightly after reaching adulthood, with 2.5% of 18–19-year-olds using drugs for intoxication. Overall, these findings suggest that older adolescents consume beer, wine, vodka, and other alcoholic beverages at higher rates than younger adolescents. This trend partially confirms the hypotheses proposed in the study.

Table 3. Substance use and the age of the surveyed adolescents

Types psychoactive substances	Number	Age of youth										Total		p	T	N
		13–14		15		16		17		18–19						
	Percent	at all	takes	at all	takes	at all	takes	at all	takes	at all	takes	at all	takes			
beer	N	52	40	53	45	28	50	20	45	10	30	163	210	,00	,000	373
	%	56,5	43,5	54,1	45,9	35,9	64,1	30,8	69,2	25	75	43,7	56,3			
wine	N	64	27	76	22	44	38	34	32	17	23	235	142	,00	,000	377
	%	70,3	29,7	77,6	22,4	53,7	46,3	51,5	48,5	42,5	57,5	62,3	37,7			
vodka	N	58	34	61	37	35	47	25	41	9	31	188	190	,00	,000	378
	%	63	37	62,2	37,8	42,7	57,3	37,9	62,1	22,5	77,5	49,7	50,3			
other alcohol	N	60	32	65	33	47	34	38	28	14	26	224	153	,01	,004	377
	%	65,2	34,8	66,3	33,7	58	42	57,6	42,4	35	65	59,4	40,6			
nicotine	N	49	43	55	42	34	48	27	39	17	23	182	195	,13	,029	377
	%	53,3	46,7	56,7	43,3	41,5	58,5	40,9	59,1	42,5	57,5	48,3	51,7			
marihuana THC	N	79	13	85	13	63	19	47	19	31	9	305	73	,06	,012	378
	%	85,9	14,1	86,7	13,3	76,8	23,2	71,2	28,8	77,5	22,5	80,7	19,3			
drugs	N	82	12	96	6	78	7	61	7	39	2	356	34	,41	,362	390
	%	87,2	12,8	94,1	5,9	91,8	8,2	89,7	10,3	95,1	4,9	91,3	8,7			
medicines	N	70	20	89	9	65	17	52	14	39	1	315	61	,01	,272	376
	%	77,8	22,2	90,8	9,2	79,3	20,7	78,8	21,2	97,5	2,5	83,8	16,2			

Legend: p—level of statistical significance, Kendell's tau—a measure of the relationship between variables, N—the number of students studied.
Source: Own study.

The study design included an additional explanatory variable: the academic performance of the surveyed students, measured by their grade point average from the previous school year. The findings related to this variable are presented in Table 3. The analysis reveals a positive correlation between students' relationships with teachers and their academic performance. Specifically, the stronger the relationship with school staff, the higher the students' academic performance. However, no statistically significant correlation was found between students' relationships with peers and their grade point averages. Therefore, the hypothesis was not supported by the data.

Table 4. Academic performance and students' relationships with teachers and peers

Learning performance		**relations with teachers**	**relations with peers**
Assessment	rho	0.128	0.022
	p	**0.024**	0.694
	N	311	310

Legend: rho—Spearman correlation coefficient, p—significance level, N—Number of respondents with symptoms.
Source: Own study.

The results in Table 4, along with the statistical calculations, indicate that all psychoactive substances examined in the study show a statistically significant correlation with academic performance.

Table 5. Academic performance vs. psychoactive substance use and dependence

Types of stimulants	**Academic performance**	
	rho	***p***
beer	0.249	**0.000**
wine	0.180	**0.002**
spirituous liquors	0.261	**0.000**
other alcoholic beverages	0.241	**0.000**
nicotine	0.241	**0.000**
cannabis	0.248	**0.000**
hard drugs	0.134	**0.017**
prescription medications	0.115	**0.044**

Types of stimulants	Academic performance	
	rho	*p*
alcohol dependence	0.299	**0.000**
nicotine addiction	0.233	**0.000**

Legend: rho—Spearman correlation coefficient, p—significance level.
Source: Own study.

The rho coefficient values suggest a clear correlation: as the intensity of drug use among adolescents increases, their academic performance tends to decline.

Discussion of the results of the study

The findings highlight that psychoactive substance use and addiction among adolescents significantly weaken their social relationships within the school environment and contribute to poorer academic performance. These results align with previous research, which similarly identifies problems in social interactions and declining academic achievements as common consequences of cannabis and other drug use (Mellibruda 1997: 17–20; Wolniewicz-Grzelak, Okulicz-Kozaryn, Pisarska 1996). Other studies have also found that substance use generally impairs students' performance at school (Ostaszewski 2008: 387). However, some research suggests that positive peer relationships can increase the risk of psychoactive substance use and exacerbate the severity of problems associated with its consequences (Pisarska et al. 2019: 347).

Notably, difficulties in adolescents' interactions with parents, teachers, or adult caregivers can diminish social support and reduce appropriate adult supervision, thereby heightening their susceptibility to risk factors (Resnick et al. 1997: 823; Ary et al. 1999: 141). An unexpected finding is the absence of a link between peer relationships and both academic performance and nicotine dependence. This may be due to the fact that academic achievement does not play a crucial role in the formation of relationships among adolescents. Instead, factors such as personal interests, personality traits, recreational activities, and family circumstances may have greater significance in fostering deeper connections.

The increasing popularity of e-cigarettes among young people highlights their perception as trendy gadgets or fashionable items. According to research conducted by the Pollster Research Institute for the Children's Rights Ombudsman, published in December 2020, over 23% of teenagers in Poland use e-cigarettes, with 72% of these users engaging in this habit regularly (Pollster[1]). Additionally, the market has seen a 116% surge in disposable e-cigarette use between 2018 and 2022, encompassing over 550,000 distinct products and representing 22% of the global e-cigarette market (Plesa 2022).

E-cigarettes have become a popular alternative to traditional smoking among young people. These devices are more accessible and convenient, allowing use in various settings, such as at home or school, and they come in appealing flavors with less offensive odors. Furthermore, studies show that adolescents do not perceive e-cigarettes as harmful in the same way as conventional cigarettes and tend to have a higher acceptance of these devices. This perception suggests that nicotine use via e-cigarettes does not stigmatize young individuals or hinder the development of social relationships, as adolescents continue to interact with peers regardless of this addiction.

It should also be added that young people are more likely to use psychoactive substances when they perceive these behaviors as common and socially accepted by their peers (Pisarska et al. 2016: 95; Berkowitz 2004; Borsari, Carey 2001; Borsari, Carey 2003). An important finding of the study is that as students grow older, they increasingly use a wider range of alcohol and drugs without a doctor's prescription. This may result from growing tolerance to a given substance and addiction, increased availability of these substances, or the belief that their use is socially accepted. Regarding adolescent drug use, research indicates that while substance use is prevalent, it is often not mainly for intoxication but rather as a means of coping with physical ailments or emotional distress (Ostaszewski et al. 2013).

1 "Wypaleni nastolatkowie... Jakie mogą być konsekwencje stosowania e-papierosów?" 4.01.2023, https://planujedlugiezycie.pl/aktualnosci/wypaleni--nastolatkowie-jakie-moga-byc-konsekwencje-stosowania-e-papierosow/ [access: 20.11.2024].

Conclusions

In the prevention of psychoactive substance use among young people, relationships between pupils and teachers, as well as peer relationships, should be treated as a protective factor. Therefore, preventive interventions should prioritize activities that foster student integration and develop social competencies, including self-control, which has already been proven effective in preventing substance use (Zuckerman 1994). Initiatives supporting students' mental health are also of great importance.

The attitude of the teacher is particularly significant, as their responsibilities extend beyond merely delivering knowledge and implementing educational programs. Today, teachers are expected to be open, curious, and attentive to students. A teacher should be someone who is trustworthy and treats students with respect. In preventive and educational work, teachers should offer engaging and constructive ways for students to spend their free time, support peer groups with positive goals, and create an environment conducive to proper socialization (Pisarska et al. 2019: 347).

Additionally, it is crucial for teachers to expand and continuously update their knowledge of addictions and preventive intervention strategies to address emerging challenges, such as the misuse of painkillers (Pisarska 2023: 87). The study results indicate that educational staff often lack sufficient knowledge and skills in addressing psychoactive substance use (Pisarska et al. 2012: 381).

Bibliography

Ary D., Duncan T., Biglan A., Meltzer C., Noell J., Smolkowski K. (1999). "Development of Adolescent Problem Behaviour," *Journal of Abnormal Child Psychology*, vol. 27, no. 2, pp. 141–150.

Berkowitz A.D. (2004). "The Social Norms Approach: Theory, Research and Annotated Bibliography," http://www.alanberkowitz.com/articles/social_norms.pdf [access: 20.11.2024].

Black K.A., McCartney K. (1997). "Adolescent Females' Security With Parents Predicts the Quality of Peer Interactions," *Social Development*, vol. 6, no. 1, pp. 91–110.

Borowski K. (2010). "Kontakty społeczne dzieci i młodzieży. Zarys problematyki," *Scripta Comeniana Lesnensia*, vol. 8, pp. 41–54.

Borsari B., Carey K.B. (2001). "Peer Influences on College Drinking: A Review of the Research," *Journal of Substance Abuse*, vol. 13, no. 4, pp. 391–424.

Borsari B., Carey K.B. (2003). "Descriptive and Injunctive Norms in College Drinking: A Meta-analytic Integration," *Journal of Studies on Alcohol*, vol. 64, no. 3, pp. 331–341.

Brzezińska A. (2000). *Społeczna psychologia rozwoju*, Warszawa: Wydawnictwo Naukowe Scholar.

Bukowski W.M., Hoza B., Boivin M. (1993). "Popularity, Friendship, and Emotional Adjustment During Early Adolescence," [in:] W. Damon, B. Laursen (eds.), *New Directions for Child Development: Close Friendships in Adolescence*, Jossey-Bass (CA): San Francisco, pp. 23–37.

Bukowski W.M., Newcomb A.F., Hartup W.W. (eds.) (1996). *The Company They Keep: Friendship in Childhood and Adolescence*, Cambridge: Cambridge University Press.

Challier B., Chau N., Predine R., Choquet M., Legras B. (2000). "Associations of Family Environment and Individual Factors With Tobacco, Alcohol, and Illicit Drug Use in Adolescent," *European Journal of. Epidemiology*, vol. 16, no. 1, pp. 33–42.

Charrier L., van Dorsselaer S., Canale N., Baska T., Kilibarda B. et al. (2024). *A Focus on Adolescent Substance Use in Europe, Central Asia and Canada: Health Behaviour in School-aged Children International Report from the 2021/2022 Survey*, vol. 3, Copenhagen: WHO Regional Office for Europe, pp. 33–39, https://iris.who.int/handle/10665/376573 [access: 22.11.2024].

Coie J.D., Dodge K.A. (1998). "Aggression and Antisocial Behaviour," [in:] N. Eisenberg (ed.), *Handbook of Child Psychology*, vol. 3: *Social, Emotional, and Personality Development*, New York: Wiley, pp. 779–862.

Corsano P., Majorano M., Champretavy L. (2006). "Psychological Well-being in Adolescence: The Contribution of Interpersonal Relations and Experience of Being Alone," *Adolescence*, vol. 41, no. 162, pp. 341–353.

Cotterell J.L. (1992). "The Relations of Attachments and Supports to Adolescent Well-being and School Adjustment," *Journal od Adolescent Research*, vol. 7, no. 1, pp. 28–42.

Dzielska A. (2017). *Zachowania ryzykowne*, Warszawa: Instytut Matki i Dziecka.

Eisenberg N., Fabes R.A. (1998). "Prosocial Development," [in]: N. Eisenberg (ed.), *Handbook of Child Psychology*, vol. 3: *Social, Emotional, and Personality Development*, New York: Wiley, pp. 701–778.

Fass M.E., Tubman J.G. (2002). "The Influence of Parental and Peer Attachment on College Students' Academic Achievement," *Psychology in the Schools*, vol. 39, no. 5, pp. 561–573.

Garnefski N., Diekstra R.F. (1996). "Perceived Social Support from Family, School, and Peers: Relationship With Emotional and Behavioural Prob-

lems Among Adolescents," *Journal of the American Academy of Child & Adolescent Psychiatry*, vol. 35, no. 12, pp. 1657–1664.

Gibson D.M., Jefferson R.N. (2006). "The Effect of Perceived Parental Involvement and the Use of Growth-fostering Relationships on Self-concept in Adolescents Participating in GEAR UP," *Adolescence*, vol. 41, no. 161, pp. 111–125.

Goldstein S.E., Davis-Kean P.E., Eccles J. (2005). "Parents, Peers and Problem Behavior: A Longitudinal Investigation of the Impact of Relationship Perceptions and Characteristics on the Development of Adolescent Problem Behavior," *Developmental Psychology*, vol. 41, no. 2, pp. 409–411.

Harris J.R. (1998). *Geny czy wychowanie? Co wyrośnie z naszych dzieci i dlaczego*, trans. A. Polkowski, Warszawa: Wydawnictwo Jacek Santorski & Co.

Kostowski W. (2001). "Współczesna farmakoterapia uzależnienia od nikotyny," *Alkoholizm i Narkomania*, vol. 14, no. 1, pp. 129–136.

Laible D.J., Carlo G., Roesch S.C. (2004). "Pathways to Self-esteem in Late Adolescence: The Role of Parent and Peer Attachment, Empathy, and Social Behaviours," *Journal of Adolescence*, vol. 27, no. 6, pp. 703–716.

Malczewski A. (2022). "Młodzież a substancje psychoaktywne," [in:] *Młodzież 2021. Raport z badania CBOS i KCPU*, Warszawa: CBOS; Krajowe Centrum Przeciwdziałania Uzależnieniem, pp. 208–223, https://kcpu.gov.pl/wp-content/uploads/2023/01/Mlodziez-2021-raport_uzupelniony.pdf [access: 20.11.2024].

Malczewski A., Jabłoński P. (2023). *Raport 2023. Uzależnienia w Polsce*, Warszawa: Krajowe Centrum Przeciwdziałania Uzależnieniom, https://kcpu.gov.pl/wp-content/uploads/2024/03/Raport-2023-wersja-Internetowa.pdf [access: 20.11.2024].

Maryl M., Korolczuk A. (2008). "Relacje z rodzicami i rówieśnikami – ich wpływ na funkcjonowanie adolescentów," *Psychiatria i Psychologia Kliniczna*, vol. 8, no. 1, pp. 46–56.

Mellibruda J. (1997). "Profilaktyka problemowa," *Remedium*, no. 10(56), pp. 17–20.

Mika S. (1975). *Wstęp do psychologii społecznej*, Warszawa: Państwowe Wydawnictwo Naukowe.

Modrzejewska R., Bomba J. (2010). "Rozpowszechnienie zaburzeń psychicznych i używania substancji psychoaktywnych w populacji 17-letniej młodzieży wielkomiejskiej," *Psychiatria Polska*, vol. 44, no. 4, pp. 579–592.

Napora E. (2019). "Skala komunikowania się adolescentów z rówieśnikami (SKAR) – właściwości psychometryczne narzędzia szacującego zadowolenie z relacji z rówieśnikami," *Polskie Forum Psychologiczne*, vol. 24, no. 1, pp. 57–78.

Oleszkowicz A., Senejko A. (2013). *Psychologia dorastania. Zmiany rozwojowe w dobie globalizacji*, Warszawa: Wydawnictwo Naukowe PWN.

Ostaszewski K. (2008). "Problemy nastolatków związane z używaniem substancji psychoaktywnych," *Alkoholizm i Narkomania*, vol. 21, no. 4, pp. 363–389.

Ostaszewski K., Bobrowski K., Borucka A., Okulicz-Kozaryn K., Pisarska A., Raduj J., Biechowska D. (2013). *Monitorowanie zachowań ryzykownych i problemów zdrowia psychicznego młodzieży. Badania mokotowskie 2012*, Warszawa: Instytut Psychiatrii i Neurologii w Warszawie; Pracownia Profilaktyki Młodzieżowej "Pro-M".

Pisarska A. (2023). "Przyjmowanie leków przeciwbólowych przez podopiecznych młodzieżowych ośrodków socjoterapii i młodzieżowych ośrodków wychowawczych," *Pediatria i Medycyna Rodzinna*, vol. 19, no. 2, s. 87–91.

Pisarska A., Bobrowski K., Borucka A., Okulicz-Kozaryn, Ostaszewski K., Raduj J. (2012). "Używanie substancji psychoaktywnych oraz agresja i przemoc wśród uczniów szkół gimnazjalnych z perspektywy badań ilościowych i jakościowych," *Alkoholizm i Narkomania*, vol. 25, no. 4, s. 357–382.

Pisarska A., Eisman A., Ostaszewski K., Zimmerman M.A. (2016). "Alcohol and Cigarette Use Among Warsaw Adolescents: Factors Associated With Risk and Resilience," *Substance Use & Misuse*, vol. 51, no. 10, pp. 83–96.

Plesa S. (2022). "Disposable E-cigarettes: Global Market Overview," *ECigIntelligence*, 13 May, https://ecigintelligence.com/disposable-e-cigarettes-global-market-overview-may-2022/ [access: 22.11.2024].

Poleszak W. (2004). "Diagnoza relacji rówieśniczych w środowisku szkolnym," [in:] Z. Gaś (ed.), *Badanie zapotrzebowania na profilaktykę w szkole. Poradnik dla szkolnych liderów profilaktyki*, Lublin: Wydawnictwo Fundacji Masz Szansę, pp. 155–170.

Resnick M.D., Bearman P.S., Blum R.W., Bauman K.E., Harris K.M., Jones J., Tabor J., Beuhring T., Sieving R.E., Shew M., Ireland M., Bearinger L.H., Udry J.R. (1997). "Protecting Adolescents from Harm: Findings from the National Longitudinal Study on Adolescent Health," *Journal of the American Medical Association*, vol. 278, no. 10, pp. 823–832.

Schneider B.H., Younger A.J. (1996). "Adolescent-Parent Attachment and Adolescent's Relations With Their Peers: A Closer Look," *Youth and Society*, vol. 28, no. 1, pp. 95–108.

Sierosławski J. (2020). *Używanie alkoholu i narkotyków przez młodzież szkolną. Raport, prezentacja oraz informacja prasowa z ogólnopolskich badań ankietowych zrealizowanych w 2019 r. Europejski program badań ankietowych w szkołach ESPAD*, Warszawa: Krajowe Biuro ds. Przeciwdziałania Narkomanii; Państwowa Agencja Rozwiązywania Problemów Alkoholowych; Instytut Psychiatrii i Neurologii, https://www.cinn.gov.pl/portal?id=166545 [access: 20.11.2024).

Stach-Hejosz M. (2011). "Postawa religijna a relacje interpersonalne katechizowanej młodzieży gimnazjalnej," *Śląskie Studia Historyczno-Teologiczne*, vol. 44, no. 1, pp. 166–176.

Ścibisz A. (2009). "Spostrzegane wsparcie i sympatia rówieśników, a style radzenia sobie ze stresem przez młodzież licealną," *Sztuka Leczenia*, vol. 3–4, pp. 73–91.

Thompson B. (2000). "Canonical Correlation Analysis," [in:] L.G. Grimm, P.R. Yarnold (eds.), *Reading and Understanding More Multivariate Statistics*, Washington: American Psychological Association, pp. 285–316.

Wojtyła A., Bojar I., Biliński P. (2010). "Problem spożywania alkoholu wśród młodzieży w Polsce," *Medycyna Ogólna*, vol. 16, no. 4, pp. 570–580.

Wolniewicz-Grzelak B., Okulicz-Kozaryn K., Pisarska A. (1996). *Substancje uzależniające. Czym są i jak działają* (Pakiet prewencyjny: Program Zapobiegania Narkomanii „Odlot", Zeszyt 7), Warszawa: Instytut Psychiatrii i Neurologii.

Woronowicz B. (2003). *Bez tajemnic o uzależnieniach i ich leczeniu*, Warszawa: Instytut Psychiatrii i Neurologii.

Woynarowska-Sołdan M., Woynarowska B., Kokoszka I., Mazur J. (2000). *Zdrowie młodzieży szkolnej w Polsce. Młodzież o szkole*, Warszawa: Katedra Biomedycznych Podstaw Rozwoju i Wychowania; Wydział Pedagogiczny UW.

"Wypaleni nastolatkowie... Jakie mogą być konsekwencje stosowania e-papierosów?" 4.01.2023, https://planujedlugiezycie.pl/aktualnosci/wypaleni-nastolatkowie-jakie-moga-byc-konsekwencje-stosowania-e-papierosow/ [access: 20.11.2024].

Zuckerman M. (1994). *Behavioral Expressions and Biosocial Bases of Sensation Seeking*, Cambridge: Cambridge University Press.

ADDRESS FOR CORRESPONDENCE:

Monika Zięciak
University of Szczecin
Institute of Pedagogy
e-mail: monika.zieciak@usz.edu.pl